

COUNTERMEASURES BRIEF

OUTLINE

0 MAPPING OF COUNTERMEASURES WITH SAFEGUARDS

0 FINDINGS FROM APPLICATION OF THE COUNTERMEASURES (EXAMPLES)

MAPPING OF COUNTERMEASURES WITH SAFEGUARDS

- 0 MAPPING PROVIDED IN PAPER
- 0 CAN BE MAPPED TO DOD CRITERIA
- 0 SAFEGUARDS, COUNTERMEASURES AND CRITERIA EMPLOY CONSISTENT IDEAS,
BUT DIFFERENT APPROACHES
- 0 REASON FOR DIFFERENT APPROACHES IS DOCUMENTS HAVE DIFFERENT USES AND
INTENTS
 - 0 COUNTERMEASURES = MEANS TO EVALUATE SAFEGUARDS
 - 0 SAFEGUARDS = POLICY TO BE COMPLIED WITH
 - 0 CRITERIA = STANDARDS AND GUIDANCE FOR IMPLEMENTATION
- 0 VIEW OF SYSTEM ARCHITECTURE IS THE PRIMARY DIFFERENCE

EXAMPLES OF APPLICATION OF THE COUNTERMEASURES

- 0 DRAFT PAPER PROVIDED
- 0 COUNTERMEASURES APPLIED TO ASSESSMENT OF
 - 0 PERSONNEL SECURITY SYSTEM
 - 0 INFORMATION SECURITY SYSTEM
 - 0 HARDWARE/SOFTWARE SECURITY SYSTEM

EXAMPLES OF COUNTERMEASURE USAGE

PERSONNEL SECURITY

FINDINGS

0 NEEDED ELEMENTS

0 HIGH LEVEL STAFF COORDINATION ORGANIZATION

0 COORDINATE ACTIVITIES

0 PROVIDE UNIFORM POLICIES

0 PROVIDE MINIMUM STANDARDS

0 EXECUTIVE ORDER TO IMPLEMENT

0 NO DIRECT INTERNAL AUTHORITY OVER CIA, OPM, DIS

EXAMPLES OF COUNTERMEASURE USAGE
INFORMATION SECURITY
FINDINGS

0 NEEDED ELEMENTS

- 0 COMPLEXITY REDUCTION
- 0 ENHANCE COORDINATION (ISOO)
- 0 SIMPLIFY INFORMATION SECURITY SYSTEM POLICY

EXAMPLES OF COUNTERMEASURE USAGE

HARDWARE/SOFTWARE SECURITY

FINDINGS

0 OVERALL

0 DEPENDENT UPON PERSONNEL AND INFORMATION SECURITY

0 SYSTEM ARCHITECTURE MAJOR ELEMENT

0 SOFTWARE ENGINEERING MAJOR PROBLEM

EXAMPLES OF COUNTERMEASURE USAGE

HARDWARE/SOFTWARE SECURITY

FINDINGS

DEPENDENT ON PERSONNEL AND INFORMATION SECURITY

O CLEARANCES AND CLASSIFICATIONS

O REPRESENTED IN HARDWARE AND SOFTWARE

O RELATIONSHIPS MAINTAINED BY HARDWARE AND SOFTWARE

O MUST BE CORRECT INITIALLY

EXAMPLES OF COUNTERMEASURE USAGE

HARDWARE/SOFTWARE SECURITY

FINDINGS

SYSTEM ARCHITECTURE

0 NEEDED ELEMENTS

- 0 HARDWARE SUPPORT FOR DOMAIN ISOLATION
- 0 SOFTWARE USE OF DOMAIN ISOLATION
- 0 ISOLATION OF PROTECTION CRITICAL ELEMENTS
- 0 RESIDUE ELIMINATING DATA AND MEMORY MANAGEMENT
- 0 DATA AND CODE INTEGRITY/SEPARATION MECHANISMS

EXAMPLES OF COUNTERMEASURE USAGE

HARDWARE/SOFTWARE SECURITY

FINDINGS

SOFTWARE ENGINEERING

- 0 ENGINEER FOR INTEGRITY, RELIABILITY, AND MAINTAINABILITY
- 0 MODULAR, HIERARCHICAL STRUCTURE
- 0 FUNCTIONAL COHESION OR INFORMATIONAL COHESION (DATA HIDING)
- 0 LOOSE COUPLING (INDEPENDENCE)
- 0 HIGH LEVEL DECISION STRUCTURE
- 0 MUTUAL SUSPICION (COMPLETE INTERFACE AND PARAMETER CHECKING) OR CODE VERIFICATION
- 0 NO RESIDUES FROM PREVIOUS MODULE INVOCATIONS
- 0 REFERENCE MONITOR